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09/542,897

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April 4, 2000

First Named Inventor

Jerry H. Chisnell

Group Art Unit

3677

Examiner Name

M. Rodgers

Attorney Docket Number

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ENCLOSURES (check all that apply)

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Remy J. VanOphem

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Date

March 3, 2003

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**PATENT APPLICATION
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Serial No. 09/542,897 Examiner: M. Rodgers
Inventor: J. Chisnell Group Art Unit: 3677
Filing Date: April 4, 2000 Date: November 30, 2001
Title: Composite Sleeve For Sealing A Tubular Coupling

* * * * *

REPLY TO OFFICE ACTION UNDER 37 CFR §1.111

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

To highlight the distinction of the above referenced invention over the prior art as interpreted by the Examiner in the Office Action of December 2, 2003, Paper No. 10, no amendments were made to the claims or specification and the undersigned offers the following remarks.

In the Office Action, the Examiner rejected independent Claims 1 and 15 under 35 U.S.C. §102(b) as being anticipated by Baron, U.S. Patent 6,260,851 (WO97/16670). The undersigned attorney respectfully traverses the Examiner's rejection of independent Claims 1 and 15 in view of the following argument for the reason that the claims are not anticipated by Baron.

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The test for determining if a reference anticipates a claim, for purposes of a rejection under 35 U.S.C. §102, is whether the reference discloses all the elements of the claimed combination, or the mechanical equivalents thereof, functioning in substantially the same way to produce substantially the same results. As noted by the Court of Appeals of the Federal Circuit in *Lindemann Maschinenfabrik GmbH v. American Hoist and Derrick Co.*, 221 USPQ 481, 485 (Fed. Cir. 1984), in evaluating the sufficiency of an anticipation rejection under 35 U.S.C. §102, the Court stated:

“Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim.”

Applicant's independent Claims 1 and 15 require:

“1. A composite sleeve seal comprising:
a body portion including at least one collar section having at least one link segment extending therefrom; and at least one seal portion contiguous with said at least one collar section and surrounding said at least one link segment to interlock said at least one seal portion with said body portion to form said composite sleeve seal as one integral component.”

“15. A composite sleeve seal comprising:
a body portion including at least one collar section having at least one link segment extending therefrom; and at least one seal portion disposed in axial prolongation with respect to said at least one collar section, said at least one seal portion being molded around at least a portion of said at least one link segment to interlock said at least one seal portion with said body portion to form said composite sleeve seal as one integral component.”

It is respectfully asserted that Baron fails to disclose each and every element of Applicant's independent claims. Specifically, Baron fails to disclose a composite seal having at least one link segment extending from a body portion. First, the "portions 47" in Baron are not link segments as clearly disclosed in Applicant's specification and claims. Second, even if the "portions 47" in Baron are viewed as link segments, they do not extend from the body portion (50). Rather, they extend from the elastomeric collar (42) as end parts 46 in the form of portions 47. Baron does not disclose that the portions 47 are part of the ring (50).

Additionally, Baron fails to disclose a composite seal having a seal portion surrounding the link segments of the body portion to interlock the seal portion to the body portion as clearly set forth in independent Claims 1 and 15. First, the collar (42) of Baron does not surround any part of the ring (50). At best, the collar of Baron axially prolongates the ring (50) of Baron, and perhaps covers a portion of the inside diameter of the ring (50) of Baron. Second, the collar or O-ring of Baron is not interlocked to the ring (50) of Baron. At best, the O-ring of Baron is surface mounted to an end portion of the ring (50) of Baron. Thus, Baron fails to disclose the composite seal as specifically claimed in independent Claims 1 and 15 by Applicant.

Applicant's attorney cautions that the Baron reference confuses the terms ring and collar throughout the entire patent. For example, in the Baron abstract and the front page figure to which it pertains, the collar (6) is sleeve-like and composed of rigid

material, and the ring (5) is an O-ring and is composed of elastomeric material. In contrast, the specification refers to Figure 5 in describing the collar (42) as a double O-ring that is composed of elastomeric material, and in describing the ring (50) as sleeve-like and composed of rigid material. Clearly, the terms ring and collar have been transposed and thus are confused in Baron. Nevertheless, Baron still fails to disclose the composite seal as specifically claimed by Applicant.

On page 2, lines 11-13 of the Office Action, the Examiner provides: "In Figure 5, Baron shows a composite sleeve seal having a body portion with at least one collar section (52) having at least one link segment (47) extending therefrom." The Baron reference character 52 identifies a surface (column 4, line 66 of the Baron reference) and clearly does not read on a collar section.

On page 2, line 14-page 3, line 1 of the Office Action, the Examiner provides:

"At least one seal portion (42) disposed in axial prolongation with respect to the at least one collar section (52) is contiguous with the at least one collar section (52) and surrounds the at least one link segment (47) at the junction between the at least one seal portion (42) and the link segment (47) generally designated at junction (49) to interlock the at least one seal portion (42) with the body portion. The seal portion (42) is considered to surround the link segment (47) because the link segment (47) extends beyond the collar section end (51) to create an area of longitudinal overlap along axis the longitudinal axis (43) between the link segment (47) and the seal portion (42)."

The Examiner provides no support for his conclusion that “the link segment (47) extends beyond the collar section end (51)”. As pointed out hereinabove, Baron reference character 47 does not designate a link segment as suggested by the Examiner, rather reference character 47 identifies portions of the collar (42) (column 4, lines 53-55 of the Baron reference). Furthermore, Baron reference character 51 does not designate a collar section end as suggested by the Examiner, rather reference character 51 identifies a junction end (column 4, lines 63-65 of the Baron reference). Finally, column 4, lines 53-60 of the Baron reference provides that one end of the Baron portions (47) is designated by the reference character 48 which, as seen in Figure 5, indicates that the portions (47) do not extend beyond the junction end (51).

Based upon the above argument, Applicant respectfully submits that the Baron reference does not disclose each and every element arranged as in the claim of any of Applicant’s independent claims. Therefore, in applying the test for anticipation as set forth above in *Lindemann*, Baron does not anticipate either independent Claim 1 or 15. Accordingly, reconsideration and withdrawal of the rejection of Claims 1 and 15 under 35 U.S.C. §102(b) is respectfully requested.

In response to the Examiner’s rejection of Claims 8-13 under 35 U.S.C. §103(a), it is respectfully suggested that Applicant’s invention is allowable for the reason that Applicant’s invention is not an obvious improvement over Baron. With respect to a rejection under 35 U.S.C. §103, it is noted in MPEP Section 706 that the standard of

patentability to be followed in the examination of a patent application is that which was enunciated by the Supreme Court in *Graham v. John Deere*, 148 USPQ 459 (1966), where the Court stated:

“Under Section 103, the scope and the content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved.”

Accordingly, to establish a *prima facie* case of obviousness, the Patent Office must: (1) set forth the differences in the claim over the applied references; (2) set forth the proposed modification of the references which would be necessary to arrive at the claimed subject matter; and (3) explain why the proposed modifications would be obvious. To satisfy step (3) above, the Patent Office must identify where the prior art provides a motivating suggestion, inference or implication to make the modifications proposed in step (2) above. *In re Jones*, 21 USPQ2d 1941 (Fed. Cir. 1992). Prior to discussing the unobviousness of the present invention over the prior art, the problems, teachings, and disclosure of each of the Baron reference and Applicant’s invention will be set forth, then the differences of the present invention over the prior art reference will be set forth.

Baron is directed to the problem of O-ring damage and the attendant difficulties in inserting a tubular connector having an O-ring into a connecting orifice. To overcome this problem, Baron teaches a composite gasket to be frictionally fit around a rigid tube end that is to be inserted into a cylindrical bore of a component. The gasket includes a rubber ring (5) in Figure 1 or collar (42) in Figure 5 in the axial prolongation of

a coaxial rigid ring. The end of the collar that engages the ring in axial prolongation has a ring-engaging shape that is complementary to that of the ring. Baron further teaches an end part (46) in the form of portions of a cylinder of small thickness, arranged angularly, parallel to and located on the same side as the axis (43) attached at lower face (49) of the collar part with which they are integral.

Applicant's invention is directed to the problem in the prior art associated with machining O-ring grooves in the end of a tube and with poor sealability of tubular connections. Applicant teaches a composite sleeve seal that can easily be slipped over the end of a tube and that provides a seal that is superior to that achievable with conventional O-rings disposed in grooves of a tube end. The composite sleeve seal includes at least one relatively rigid body portion that is collar-like in shape. Integral segments axially extend from the body portion. A seal portion that looks like an O-ring is molded to the body portion so as to surround the link segments such that the seal portion interlocks with the body portion.

Clearly, there are significant differences between Applicants' invention and the teachings of Baron. First, Baron teaches a conventional O-ring that is adhered to a cylindrical collar in axial prolongation of the collar. In contrast, Applicant teaches a seal portion that is molded to a rigid body portion around axially extending link segments that integrally extend from the rigid body portion. Thus, no adhesion process is needed. Second, each alternating collar and ring of Baron must be individually manufactured,

resulting in an abundance of individual parts to be made, handled, and assembled together. Third, each alternating collar and ring must be adhered together, thus resulting in still more manufacturing steps. Fourth, due to the harsh environment in which such gaskets are used, an adhered connection between the collars and rings may separate. Consequently, the manufacture of the gasket is relatively time consuming and expensive, while performance of such an adhered thermoplastic in a demanding environment is not well established.

The solutions taught Baron are directed to problems totally different than that described in Applicant's invention. Baron is directed to the problem of O-ring damage and the attendant difficulties in inserting a tubular connector having an O-ring into a connecting orifice. Conversely, the teachings of Applicant's invention is directed to the problem in the prior art associated with machining O-ring grooves in the end of a tube and with poor sealability of tubular connections. There is no indication that Baron recognized any of the problems identified by the Applicants, and absent recognition of the problem faced by the Applicants, Baron cannot possibly suggest a solution as novel as Applicant's invention.

The Examiner combines the Baron embodiment of Figures 5-7 with the embodiment of Figures 2-3 as the basis for the rejection of Claims 8-13 under 35 U.S.C. §103(a). It is respectfully suggested that the Examiner improperly combines elements from unrelated configurations resulting in an embodiment that is contrary to Barons advantageous objectives and was never envisioned by Baron. The Examiner selects

individual elements from multiple discrete embodiments without addressing the structural interrelationships therebetween or considering the functionality. Furthermore, the Examiner does not provide any explanation as to why such a combination of embodiments would be desirable other than for the purpose of rejecting Applicant's claims. It is well settled patent law that the mere fact that a disclosure can somehow be combined with other references does not make that combination obvious unless the prior art contains some suggestion of the desirability for combining the prior art references. Here, the Baron reference contains absolutely no suggestion whatsoever for combining the distinct embodiments as set forth in the Examiner's rejection to teach the invention as claimed according to Applicant's disclosure. Therefore, it is respectfully suggested that the Examiner is using hindsight reconstruction in an attempt to obviate Applicant's invention after having the benefit of reading Applicant's application.

Accordingly, Applicant's invention is an unobvious improvement over the prior art and not an obvious modification of any of the references of record in this application. When viewed singularly or collectively, none of the prior art references of record disclose, teach, or suggest an integrated composite sleeve seal for use with a tubular connection and, in fact, Applicant performs this for the first time. Reconsideration and withdrawal of the Examiner's rejections are, therefore, respectfully requested.

In view of the foregoing remarks, the undersigned attorney respectfully submits that the pending independent and dependent claims are in proper form, define

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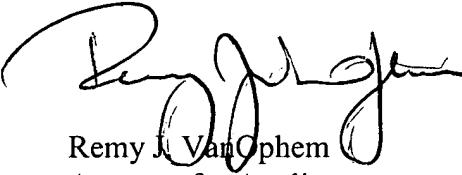
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patentably over the prior art, and are clearly allowable. Applicant's attorney, therefore, respectfully requests that the Examiner's rejections and/or restriction under 35 U.S.C. §§102 and 121 be reconsidered and withdrawn and that a formal Notice of Allowance of the application be issued.

The undersigned wishes to express his appreciation to the Examiner for the indication that Claims 2-7 are allowed. If the Examiner has any questions with respect to any matter now of record, Applicant's attorney may be reached at (248) 362-1210.

Respectfully submitted,

VANOPHEM & VANOPHEM, P.C.

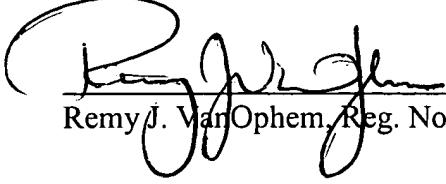

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Date: March 3, 2003


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